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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,385	03/26/2007	Karl-Ernst Hensger	HM-680PCT	6474
40570	7590	02/08/2011		
Lucas & Mercanti, LLP 475 Park Avenue South, 15th Floor New York, NY 10016			EXAMINER YEE, DEBORAH	
			ART UNIT 1733	PAPER NUMBER
			MAIL DATE 02/08/2011	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,385	Applicant(s) HENSGER ET AL.	
	Examiner Deborah Yee	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 to 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over machine-English translation of Japanese patent 09-241790 (hereafter "JP'790") alone or in view of US Patent 4,561,910 to Kato et al. ("Kato") and further in view of US Patent 3,533,261 to Hollander et al. ("Hollander") or US Patent 3,905,216 to Hinrichsen ("Hinrichsen") for the reasons set forth in office action dated August 24, 2010.

Response to Arguments

3. Applicant's arguments filed January 24, 2011 have been fully considered but they are not persuasive.

4. Applicant's arguments are summarized below.

1) Steel of JP'790 contains at most 0.30% Cr whereas claim 1 of present application requires > 0.3% Cr. To establish criticality of Cr concentration, Applicant provided attached test data which indicates a steel containing 0.273% Cr (prior art) exhibits lower tensile strength and fracture elongation compared to a steel containing 0.614%Cr(present invention).

2) JP'790 does not teach adjusting the ferrite content within the matrix to be between 70 and 95% with the remainder martensite. Applicant questions whether

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JP'790 teaches a microstructure that is close to the dual-phase steel according to the present invention since JP'790 teaches using a different alloy and is silent regarding the two-stage controlled cooling within the limits defined in section a) of claim 1.

3) The secondary references do not teach a two-stage cooling regime and therefore not combinable with JP'790.

5. In response to argument #1, Applicant's submitted test data is ineffectively to establish criticality for presently claimed Cr range because test data is not commensurate in scope with the degree or range of protection sought. The presently claimed Cr requires >0.3-1.2% but Applicant provided only one test example containing 0.614% Cr, and there are no examples to support criticality for of the lower portion of the claimed Cr range of >0.3% (e.g. 0.32%Cr).

6. On the other hand, Applicant's dual-phase steel composition containing >0.3-1.2% Cr is taught by Kato in claims 1-3 of columns 8-10. Therefore it would be well within the skill of the artisan to apply slightly different but analogous steel known in the art, such as the steel of Kato, to the method of JP'790.

7. In response to argument #2, the specific examples in tables 1 to 4 of JP'790 are processed by a 2-stage cooling process similar to present invention to produce a microstructure within the claimed ranges of 70-95% ferrite and 30-5% martensite and high tensile strength greater than 600 MPa. See detailed explanation in paragraphs 4-6 of office action dated August 24, 2010.

8. In response to argument #3, Hinrichsen and Hollander are merely secondary references to show that it is conventional practice in the metallurgical art to adjust

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cooling rate according to number and distribution of sprayers and water-adjusting valves; and such adjustment would be obvious and well within the skill of the artisan to incorporate to the method of JP'790 for control cooling.

9. For the foregoing reasons, claims would not patentably distinguish over prior art.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner, Art Unit 1733

/DY/